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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/578,750

05/10/2006

Riyuuhei Tamamoto

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38834 7590 04/11/2007
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EXAMINER

LEUNG, KA CHUN A

ART UNIT

PAPER NUMBER

3747

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/11/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/578,750

Applicant(s)

TAMAMOTO ET AL.

Examiner

Ka Chun Leung

Art Unit

3747

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 05102006 10032006.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The disclosure is objected to because of the following informalities: on Page 4, Lines 17-18, the word "not" appears out of place or is unnecessary.
Appropriate correction is required.

Claim Objections

3. Claim 1 is objected to because of the following informalities: lines 10-15 contain verb tense agreement issues. For instance "present time is elapsed" is used as opposed to –present time has been elapsed–, "after the microcomputer starts up by the electricity output" as opposed to –after the microcomputer has been started up by the electricity outputted–. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 3747

5. Claim 1 recites the limitation "preset time" in line 11. There is insufficient antecedent basis for this limitation in the claim. The claim should be rewritten to recite —a preset time— since one has not been previously recited.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

Art Unit: 3747

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over FIORENZA (US 5,383,433). FIORENZA discloses a microprocessor-controlled inductive ignition system. As noted in Column 3, a "feature and advantage of the present invention [is] to provide a micro-processor-controlled ignition system that does not require a battery to start the engine". The system comprises "an inductive ignition circuit [that] is of the magneto-type, so that no battery is required to start the engine", and further includes a microprocessor (30) and "an ignition device such as a spark plug".
10. FIORENZA further discloses that the inductive circuit is used for operating the engine below a predetermined cut-off speed such as 1,000 rpm, and a processor-controlled ignition circuit for operating the engine above the predetermined speed. The microprocessor further includes a "means for storing a plurality of desired ignition advance values that are functionally related to the magnitude of the elapsed time." The processor-controlled ignition circuit determines an elapsed time between a first and second events and compares that time with a predetermined time relating to a predetermined cut-off speed. Once the engine reaches the predetermined speed/time, the microprocessor grounds the trigger winding through the SCR, and generates control signals that control ignition timing dependent upon optimal ignition advance vales stored

Art Unit: 3747

in the microprocessor memory. Note that either the magneto-inductive circuit or alternator of FIORENZA can be construed as a "power generator".

11. While FIORENZA discloses in the Background that the invention relates to an ignition system for small engines such as those "used on lawnmowers, snowblowers, and the like," and also that "magneto inductive ignition systems are known that enable internal combustion engines to be started and run without the need for a separate power supply," FIORENZA does not distinctly disclose an output shaft, a power generator connected to a output shaft, or a flywheel connected to a output shaft.

12. It is well known in the art to provide small engines, particularly those used in lawnmowers, with a flywheel including magnets/magneto in order to provide steady rotation of the shaft despite fluctuating torque output from the piston(s) and additionally to provide power to the ignition system such as the spark plugs. Thus it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have provided an engine using the ignition system of FIORENZA with a magneto flywheel attached to a crankshaft or output shaft. For examples see US 4,727,851, US 4,023,550, and the article entitled "How does a magneto work?".

13. Regarding the claimed limitation of an "initial igniting function" or "ignition instructions" does not materially affect the apparatus. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Please refer to *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Art Unit: 3747

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is listed in the attached PTO-892.

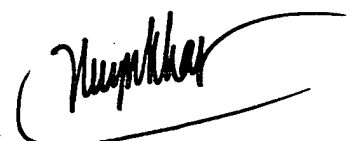
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ka Chun Leung whose telephone number is (571) 272-9963. The examiner can normally be reached on 7:30AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Cronin can be reached on (571) 272-4536. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCL
02 APR 2007

Ka Chun Leung
Examiner
Art Unit 3747


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